

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 December 2005 (15.12.2005)

PCT

(10) International Publication Number
WO 2005/118552 A2

(51) International Patent Classification⁷: **C07D 231/16**,
A01N 43/56

(21) International Application Number:
PCT/US2005/012465

(22) International Filing Date: 12 April 2005 (12.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/561,813 13 April 2004 (13.04.2004) US

(71) Applicant (for all designated States except US): **E.I. DUPONT DE NEMOURS AND COMPANY** [US/US];
1007 Market Street, Wilmington, Delaware 19898 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LAHM, George, Philip** [US/US]; 148 Fairhill Drive, Wilmington, Delaware 19808 (US). **SELBY, Thomas, Paul** [US/US]; 116 Hunter Court, Wilmington, Delaware 19808 (US).

(74) Agent: **BIRCH, Linda, D.**; E. I. DU PONT DE NEMOURS AND COMPANY, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, Delaware 19805 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

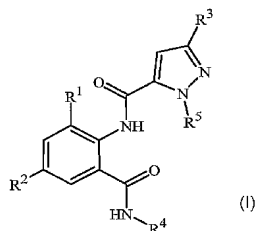
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ANTHRANILAMIDE INSECTICIDES



(I)

(57) Abstract: This invention provides compounds of Formula 1, *N* oxides and suitable salts thereof, wherein R¹ is Me, Cl, Br or I; R² is Cl, Br, I or -CN; R³ is Cl, Br, CF₃, OCH₂CF₃ or OCF₂H; R⁴ is H; or C₁₋₄alkyl, C₂₋₄alkenyl or C₂₋₄alkynyl, each optionally substituted with CN or Sme; and R⁵ is phenyl substituted with 1 to 3 substituents selected from the group consisting of F, Cl, Br and Me. Also disclosed are methods for controlling an invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of a compound of Formula 1, an *N*-oxide thereof or a suitable salt of the compound (e.g., as a composition described herein). This invention also pertains to a composition for controlling an invertebrate pest comprising a biologically effective amount of a compound of Formula 1, an *N*-oxide thereof or a suitable salt of the compound and at least one additional component selected from the group consisting of a surfactant, a solid diluent and a liquid diluent.